

**Patent** [19]

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**[54] PHOTOCATALYST DEVICE AND ITS APPLICATION DEVICE**

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[51] Int. Cl.<sup>6</sup> B01J03502 ; A61L00920; B01J02106; C02F00132; C02F00172**[57] ABSTRACT**

**PURPOSE:** To provide a photocatalyst device which utilizes the photocatalyst reaction of a photocatalyst for purification, sterilization, etc., of air and water, is formable to a compact structure applicable even to places shaded of sunshine, etc., narrow places, etc., and consumes less electric power.

**CONSTITUTION:** This photocatalyst device includes a base body 1 which carries the photocatalyst 2 consisting of a thin film of titanium dioxide, and has a photocatalyst reaction surface and a light emitting diode 3 which is arranged to make this photocatalyst 2 illuminatable and mainly radiates UV rays of a wavelength of 360 to 400nm. Since the light emitting diode 3 is used as a UV source for activation of the photocatalyst 2, entire part of the device is formable compact. This device is embodied as deodorizing devices, potable water purifying devices, antimicrobial devices having antimicrobial surfaces, etc.

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